ENTERED PCT09

RAW SEQUENCE LISTING   DATE: 03/05/2002
PATENT APPLICATION: US/09/701,014   TIME: 14:12:21

Input Set : A:\sequence list.txt
Output Set: N:\CRF3\03052002\I701014.raw

```
 3 <110> APPLICANT: Mitraphanous, Kyrlacos
 4        Patil, Deva
 5        Kingsman, Alan
 6        Kingsman, Susan
 7        Ellard, Fiona
 9 <120> TITLE OF INVENTION: Retroviral Delivery System
11 <130> FILE REFERENCE: 550-184
13 <140> CURRENT APPLICATION NUMBER: 09/701,014
14 <141> CURRENT FILING DATE: 2001-05-24
16 <150> PRIOR APPLICATION NUMBER: PCT/GB99/01607
17 <151> PRIOR FILING DATE: 1999-05-21
19 <150> PRIOR APPLICATION NUMBER: GB 9811153.7
20 <151> PRIOR FILING DATE: 1998-07-17
22 <160> NUMBER OF SEQ ID NOS: 4
24 <170> SOFTWARE: PatentIn Ver. 2.0
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 1650
28 <212> TYPE: DNA
29 <213> ORGANISM: Artificial Sequence
31 <220> FEATURE:
32 <223> OTHER INFORMATION: Description of Artificial Sequence: rabies virus strain ERA
34 <400> SEQUENCE: 1
35 aggaaagatg gttcctcagg ctctcctgtt tgtacccctt ctggtttttc cattgtgttt 60
36 tgggaaattc cctatttaca cgatactaga caagcttggt ccctggagcc cgattgacat 120
37 acatcacctc agctgcccaa acaatttggt agtggaggac gaaggatgca ccaacctgtc 180
38 agggttctcc tacatggaac ttaaagttgg atacatctta gccataaaaa tgaacgggtt 240
39 cacttgcaca ggcgttgtga cggaggctga aacctacact aacttcgttg gttatgtcac 300
40 aaccacgttc aaaagaaagc atttccgccc aacaccagat gcatgtagag ccgcgtacaa 360
41 ctggaagatg gccggtgacc ccagatatga agagtctcta cacaatccgt accctgacta 420
42 ccgctggctt cgaactgtaa aaaccaccaa ggagtctctc gttatcatat ctccaagtgt 480
43 agcagatttg gacccatatg acagatccct tcactcgagg gtcttcccta gcgggaagtg 540
44 ctcaggagta gcggtgtctt ctacctactg ctccactaac cacgattaca ccatttggat 600
45 gcccgagaat ccgagactag ggatgtcttg tgacattttt accaatagta gagggaagag 660
46 agcatccaaa gggagtgaga cttgcggctt tgtagatgaa agaggcctat ataagtcttt 720
47 aaaaggagca tgcaaactca agttatgtgg agttctagga cttagactta tggatggaac 780
48 atgggtcgcg atgcaaacat caaatgaaac caaatggtgc cctcccgatc agttggtgaa 840
49 cctgcacgac tttcgctcag acgaaattga gcaccttgtt gtagaggagt tggtcaggaa 900
50 gagagaggag tgtctggatg cactagagtc catcatgaca accaagtcag tgagtttcag 960
51 acgtctcagt catttaagaa aacttgtccc tgggtttgga aaagcatata ccatattcaa 1020
52 caagaccttg atggaagccg atgctcacta caagtcagtc agaacttgga atgagatcct 1080
53 cccttcaaaa gggtgtttaa gagttggggg gaggtgtcat cctcatgtga acggggtgtt 1140
54 tttcaatggt ataatattag gacctgacgg caatgtctta atcccagaga tgcaatcatc 1200
55 cctcctccag caacatatgg agttgttgga atcctcggtt atcccccttg tgcacccect 1260
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/701,014

DATE: 03/05/2002
TIME: 14:12:21

Input Set : **A:\sequence list.txt**
Output Set: **N:\CRF3\03052002\I701014.raw**

```
56 ggcagacccg tctaccgttt tcaaggacgg tgacgaggct gaggattttg ttgaagttca 1320
57 ccttcccgat gtgcacaatc aggtctcagg agttgacttg ggtctcccga actgggggaa 1380
58 gtatgtatta ctgagtgcag gggccctgac tgccttgatg ttgataattt tcctgatgac 1440
59 atgttgtaga agagtcaatc gatcagaacc tacgcaacac aatctcagag ggacagggag 1500
60 ggaggtgtca gtcactcccc aaagcgggaa gatcatatct tcatgggaat cacacaagag 1560
61 tgggggtgag accagactgt gaggactggc cgtcctttca acgatccaag tcctgaagat 1620
62 cacctcccct tgggggggttc tttttaaaaa                                  1650
```

64 <210> SEQ ID NO: 2
65 <211> LENGTH: 524
66 <212> TYPE: PRT
67 <213> ORGANISM: Artificial Sequence
69 <220> FEATURE:
70 <223> OTHER INFORMATION: Description of Artificial Sequence: rabies virus strain ERA

72 <400> SEQUENCE: 2

```
73 Met Val Pro Gln Ala Leu Leu Phe Val Pro Leu Leu Val Phe Pro Leu
74 1               5               10              15
76 Cys Phe Gly Lys Phe Pro Ile Tyr Thr Ile Leu Asp Lys Leu Gly Pro
77             20              25              30
79 Trp Ser Pro Ile Asp Ile His His Leu Ser Cys Pro Asn Asn Leu Val
80         35              40              45
82 Val Glu Asp Glu Gly Cys Thr Asn Leu Ser Gly Phe Ser Tyr Met Glu
83     50              55              60
85 Leu Lys Val Gly Tyr Ile Leu Ala Ile Lys Met Asn Gly Phe Thr Cys
86 65              70              75              80
88 Thr Gly Val Val Thr Glu Ala Glu Thr Tyr Thr Asn Phe Val Gly Tyr
89             85              90              95
91 Val Thr Thr Thr Phe Lys Arg Lys His Phe Arg Pro Thr Pro Asp Ala
92             100             105             110
94 Cys Arg Ala Ala Tyr Asn Trp Lys Met Ala Gly Asp Pro Arg Tyr Glu
95         115             120             125
97 Glu Ser Leu His Asn Pro Tyr Pro Asp Tyr Arg Trp Leu Arg Thr Val
98     130             135             140
100 Lys Thr Thr Lys Glu Ser Leu Val Ile Ile Ser Pro Ser Val Ala Asp
101 145             150             155             160
103 Leu Asp Pro Tyr Asp Arg Ser Leu His Ser Arg Val Phe Pro Ser Gly
104             165             170             175
106 Lys Cys Ser Gly Val Ala Val Ser Ser Thr Tyr Cys Ser Thr Asn His
107             180             185             190
109 Asp Tyr Thr Ile Trp Met Pro Glu Asn Pro Arg Leu Gly Met Ser Cys
110         195             200             205
112 Asp Ile Phe Thr Asn Ser Arg Gly Lys Arg Ala Ser Lys Gly Ser Glu
113     210             215             220
115 Thr Cys Gly Phe Val Asp Glu Arg Gly Leu Tyr Lys Ser Leu Lys Gly
116 225             230             235             240
118 Ala Cys Lys Leu Lys Leu Cys Gly Val Leu Gly Leu Arg Leu Met Asp
119             245             250             255
121 Gly Thr Trp Val Ala Met Gln Thr Ser Asn Glu Thr Lys Trp Cys Pro
122             260             265             270
124 Pro Asp Gln Leu Val Asn Leu His Asp Phe Arg Ser Asp Glu Ile Glu
```

```
 125            275                 280                 285
 127 His Leu Val Val Glu Glu Leu Val Arg Lys Arg Glu Glu Cys Leu Asp
 128      290                 295                 300
 130 Ala Leu Glu Ser Ile Met Thr Thr Lys Ser Val Ser Phe Arg Arg Leu
 131 305                 310                 315                 320
 133 Ser His Leu Arg Lys Leu Val Pro Gly Phe Gly Lys Ala Tyr Thr Ile
 134                 325                 330                 335
 136 Phe Asn Lys Thr Leu Met Glu Ala Asp Ala His Tyr Lys Ser Val Arg
 137             340                 345                 350
 139 Thr Trp Asn Glu Ile Leu Pro Ser Lys Gly Cys Leu Arg Val Gly Gly
 140             355                 360                 365
 142 Arg Cys His Pro His Val Asn Gly Val Phe Phe Asn Gly Ile Ile Leu
 143     370                 375                 380
 145 Gly Pro Asp Gly Asn Val Leu Ile Pro Glu Met Gln Ser Ser Leu Leu
 146 385                 .390                395                 400
 148 Gln Gln His Met Glu Leu Leu Glu Ser Ser Val Ile Pro Leu Val His
 149             405                 410                 415
 151 Pro Leu Ala Asp Pro Ser Thr Val Phe Lys Asp Gly Asp Glu Ala Glu
 152             420                 425                 430
 154 Asp Phe Val Glu Val His Leu Pro Asp Val His Asn Gln Val Ser Gly
 155     435                 440                 445
 157 Val Asp Leu Gly Leu Pro Asn Trp Gly Lys Tyr Val Leu Leu Ser Ala
 158     450                 455                 460
 160 Gly Ala Leu Thr Ala Leu Met Leu Ile Ile Phe Leu Met Thr Cys Cys
 161 465                 470                 475                 480
 163 Arg Arg Val Asn Arg Ser Glu Pro Thr Gln His Asn Leu Arg Gly Thr
 164             485                 490                 495
 166 Gly Arg Glu Val Ser Val Thr Pro Gln Ser Gly Lys Ile Ile Ser Ser
 167             500                 505                 510
 169 Trp Glu Ser His Lys Ser Gly Gly Glu Thr Arg Leu
 170             515                 520
 173 <210> SEQ ID NO: 3
 174 <211> LENGTH: 44
 175 <212> TYPE: DNA
 176 <213> ORGANISM: Artificial Sequence
 178 <220> FEATURE:
 179 <223> OTHER INFORMATION: Description of Artificial Sequence: primer
 181 <400> SEQUENCE: 3
 182 gatgctcact acaagtcagt ccagacttgg aatgagatcc tccc                44
 184 <210> SEQ ID NO: 4
 185 <211> LENGTH: 44
 186 <212> TYPE: DNA
 187 <213> ORGANISM: Artificial Sequence
 189 <220> FEATURE:
 190 <223> OTHER INFORMATION: Description of Artificial Sequence: primer
 192 <400> SEQUENCE: 4
 193 gggaggatct cattccaagt ctggactgac ttgtagtgag catc                44
```

VERIFICATION SUMMARY
DATE: 03/05/2002
PATENT APPLICATION: US/09/701,014
TIME: 14:12:22

Input Set : **A:\sequence list.txt**
Output Set: **N:\CRF3\03052002\I701014.raw**

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date